

JFW

GLM:cm 07/28/04 3382-65679-01 304558.01

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Mitchell et al.

Application No. 10/625,892

Filed: July 22, 2003

Confirmation No. 1536

For: GENERAL PURPOSE INTERMEDIATE
REPRESENTATION OF SOFTWARE FOR
SOFTWARE DEVELOPMENT TOOLS

Examiner: To be assigned

Art Unit: 2122

Attorney Reference No. 3382-65679-01

CERTIFICATE OF MAILING

I hereby certify that this paper and the documents referred to as being attached or enclosed herewith are being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450 on the date shown below.

Attorney
for Applicant(s) G. L. Kauer

Date Mailed July 28, 2004

COMMISSIONER FOR PATENTS
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT
PURSUANT TO 37 C.F.R. § 1.97(b)

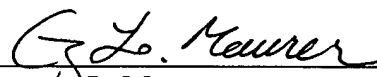
Listed on the accompanying form PTO-1449 and enclosed herewith are several English-language and/or non-English-language documents. Applicants respectfully request that these documents be listed as references cited on the issued patent.

Applicants filed this Information Disclosure Statement ("IDS") within three months of the filing date of a national application, within three months of the date of entry of the national stage as set forth in § 1.491 in an international application, before the mailing date of a first Office action on the merits, or before the mailing of a first Office action after the filing of request for continued examination under § 1.114. As a result, no fee should be required to file this IDS. However, if the Patent Office determines that a fee is required for Applicants to file this IDS, please charge any such fees, or credit overpayment, to Deposit Account No. 02-4550. A **duplicate** copy of this Information Disclosure Statement is enclosed.

The filing of this IDS shall not be construed to be an admission that the information cited in the statement is, or is considered to be, prior art or otherwise material to patentability as defined in 37 C.F.R. §1.56.

Respectfully submitted,

KLARQUIST SPARKMAN, LLP

By 
Gregory L. Maurer
Registration No. 43,781

One World Trade Center, Suite 1600
121 S.W. Salmon Street
Portland, Oregon 97204
Telephone: (503) 226-7391
Facsimile: (503) 228-9446

cc: Docketing

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Mitchell et al.

Application No. 10/625,892

Filed: July 22, 2003

Confirmation No. 1536

For: GENERAL PURPOSE INTERMEDIATE
REPRESENTATION OF SOFTWARE FOR
SOFTWARE DEVELOPMENT TOOLS

Examiner: To be assigned

Art Unit: 2122

Attorney Reference No. 3382-65679-01

COMMISSIONER FOR PATENTS
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450

CERTIFICATE OF MAILING

I hereby certify that this paper and the documents referred to as being attached or enclosed herewith are being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450 on the date shown below.

Attorney
for Applicant(s) _

G. L. Maurer

Date Mailed July 28, 2004

TRANSMITTAL LETTER

Enclosed for filing in the application referenced above are the following:

- ☒ Information Disclosure Statement
- ☒ Form 1449 and references cited thereon
- ☒ Please return the enclosed postcard to confirm that the items listed above have been received.

Respectfully submitted,

KLARQUIST SPARKMAN, LLP

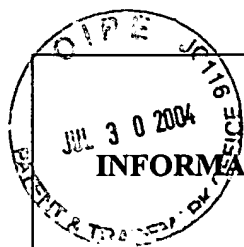
By

G. L. Maurer

Gregory L. Maurer
Registration No. 43,781

One World Trade Center, Suite 1600
121 S.W. Salmon Street
Portland, Oregon 97204
Telephone: (503) 226-7391
Facsimile: (503) 228-9446

cc: Docketing



INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Attorney Docket Number	3382-65679-01
Application Number	10/625,892
Filing Date	July 22, 2003
First Named Inventor	Mitchell
Art Unit	2122
Examiner Name	To be assigned

U.S. PATENT DOCUMENTS

NOTE: If this application was filed after June 30, 2003, copies of United States patents and United States published patent applications do not have to be provided to the Patent Office. This requirement of 37 C.F.R. § 1.98(a)(2)(i) has been waived by the United States Patent and Trademark Office pursuant to the Official Gazette Notice on August 5, 2003 (1276 OG 55).

Examiner's Initials*	Cite No. (optional)	Number	Issue Date	Name of Applicant or Patentee
		5,742,828	4/21/98	Canady et al.
		5,768,595	6/16/98	Gillies
		5,857,105	1/5/99	Ayers et al.
		5,943,499	8/24/99	Gillies et al.
		5,937,195	8/10/99	Ju et al.
		5,999,739	12/7/99	Soni et al.
		6,009,273	12/28/99	Ayers et al.
		6,070,011	5/30/00	Liu et al.
		6,182,284	1/30/01	Sreedhar et al.
		6,249,910	6/19/01	Ju et al.
		6,353,924	3/5/02	Ayers et al.
		6,460,178	10/1/02	Chan et al.
		6,481,008	11/12/02	Chaiken et al.
		6,625,808	9/23/03	Tarditi
		6,662,356	12/9/03	Edwards et al.
		6,678,805	1/13/04	Corduneanu et al.

EXAMINER
SIGNATURE:

DATE
CONSIDERED:

* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Attorney Docket Number	3382-65679-01
				Application Number	10/625,892
				Filing Date	July 22, 2003
				First Named Inventor	Mitchell
				Art Unit	2122
				Examiner Name	To be assigned
		6,745,383	6/1/04	Agarwal et al.	
		6,748,584	6/8/04	Witchel et al.	

U.S. PATENT DOCUMENTS

NOTE: If this application was filed after June 30, 2003, copies of United States patents and United States published patent applications do not have to be provided to the Patent Office. This requirement of 37 C.F.R. § 1.98(a)(2)(i) has been waived by the United States Patent and Trademark Office pursuant to the Official Gazette Notice on August 5, 2003 (1276 OG 55).

Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
		2002/0083425	6/27/02	Gillies et al.
		2003/0101380	5/29/03	Chaiken et al.
		2002/0166115	11/7/02	Sastry
		2003/0101335	5/29/03	Gillies et al.
		2003/0217197	11/20/03	Chan et al.
		2003/0217196	11/20/03	Chan et al.
		2003/0226133	12/4/03	Grover

FOREIGN PATENT DOCUMENTS

Examiner's Initials*	Cite No. (optional)	Country	Number	Publication Date	Name of Applicant or Patentee
		PCT	WO 01/48607	7/5/01	Incert Software Corporation

OTHER DOCUMENTS

Examiner's Initials*	Cite No. (optional)	
		"Common Language Infrastructure (CLI), Partition 1: Concepts and Architecture," ECMA TC39/TG3, Section 11.6, pages 1-103, October 2002.
		"The LEX & YACC Page," http://dinosaur.compilertools.net/ , 4 pages, website visited on June 16, 2003.

EXAMINER SIGNATURE:	DATE CONSIDERED:
<p>* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Attorney Docket Number	3382-65679-01
		Application Number	10/625,892
		Filing Date	July 22, 2003
		First Named Inventor	Mitchell
		Art Unit	2122
		Examiner Name	To be assigned
		"SMGN Reference Manual," http://suif.stanford.edu/suif/suif2/doc-2.20-4/ , pages 1-3, May 2003.	
		"Zephyr Abstract Syntax Description Language (ASDL): Zephyr ASDL," http://web.archive.org/web/19991103153820/http://www.cs.virginia.edu/zephyr/asdl.html , 1 page, Nov. 3, 1999.	
		"Zephyr Compiler Infrastructure: Zephyr: Tools for a National Compiler Infrastructure," http://web.archive.org/web/20000817014546/http://www.cs.virginia.edu/zephyr/ , 1 page, Aug. 17, 2000.	
		"Zephyr Computer Systems Description Languages (CSDL): Generating Machine-Dependent Compiler Parts Using CSDL," http://web.archive.org/web/20000829045324/www.cs.virginia.edu/zephyr/cSDL/ , 1 page, Aug. 29, 2000.	
		"Zephyr Register Transfer Lists (RTLs): Compiling with Register Transfer Lists (RTLs)," http://web.archive.org/web/20000829045407/http://www.cs.virginia.edu/zephyr/rtl.html , 2 pages, Aug. 29, 2000.	
		"Zephyr Very Portable Optimizer (vpo): Machine-Independent Optimization," http://web.archive.org/web/20010424131242/http://www.cs.virginia.edu/zephyr/vpo/ , 1 page, April 24, 2001.	
		ADL-TABATABAI et al., "Code Reuse in an Optimizing Compiler," ACM SIGPLAN Notices, Proceedings of the Eleventh Annual Conference on Object-Oriented Programming Systems, Languages, and Applications, Volume 31, Issue 10, pages 51-68, October 1996.	
		AIGNER et al., "An Overview of the SUIF2 Compiler Infrastructure," Technical Report, Computer Systems Laboratory, Stanford University and Portland Group, Inc., pages 1-14, 2000.	
		AIGNER et al., "SUIF Compiler System: The SUIF Program Representation," Computer Systems Laboratory, Stanford University and The Portland Group, Inc., http://suif.stanford.edu/suif/suif2/doc-2.2.0-4/suifguide/ , pages 1-30, August 14, 2000.	
		APPEL et al., "The Zephyr Compiler Infrastructure," Internal Report, http://www.cs.virginia.edu/zephyr , Princeton University and University of Virginia, pages 1-10, November 6, 1998.	
		AYERS et al., "Scalable Cross-Module Optimization," ACM SIGPLAN Notices, Proceedings of the ACM SIGPLAN 1998 Conference on Programming Language Design and Implementation, Volume 33, Issue 5, pages 301-312, May 1998.	
		BENITEZ et al., "Target-Specific Global Code Improvement: Principles and Applications," Technical Report CS-94-92, Department of Computer Science, University of Virginia, pages 1-14, 1994.	

EXAMINER SIGNATURE:	DATE CONSIDERED:
* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Attorney Docket Number	3382-65679-01
		Application Number	10/625,892
		Filing Date	July 22, 2003
		First Named Inventor	Mitchell
		Art Unit	2122
		Examiner Name	To be assigned
		BLICKSTEIN et al., "The GEM Optimizing Compiler System," Digital Technical Journal, Volume 4, No. 4, Special Issue, pages 1-17, 1992.	
		BROOKS et al., "Design of An Optimizing, Dynamically Retargetable Compiler for Common Lisp," Proceedings of the 1986 ACM Conference on LISP and functional programming, pages 67-85, August 1986.	
		DEVANBU, "Re-targetability in Software Tools," ACM SIGAPP Applied Computing Review, Volume 7, Issue 3, pages 19-26, September 1999.	
		ENGLER, "VCODE: A Retargetable, Extensible, Very Fast Dynamic Code Generation System," ACM SIGPLAN Notices, Proceedings of the ACM SIGPLAN 1996 Conference on Programming Language Design and Implementation, Volume 31, Issue 5, pages 160-170, May 1996.	
		GANAPATHI et al., "Retargetable Compiler Code Generation," ACM Computing Surveys (CSUR), Volume 14, Issue 4, pages 573-592, December 1982.	
		GOODENOUGH, "Exception Handling: Issues and a Proposed Notation," Communications of the ACM, Volume 18, No. 12, pages 683-696, December 1975.	
		GUILAN et al., "Retargetable Cross Compilation Techniques --Comparison and Analysis of GCC and Zephyr," <i>ACM SIGPLAN Notices</i> , Technical Correspondence, Volume 37, Issue 6, pages 38-44, June 2002.	
		HAYES et al., "Component Design of Retargetable Program Analysis Tools that Reuse Intermediate Representations," Proceedings of the 22 nd International Conference on Software Engineering, Limerick, Ireland, ACM, pages 356-365, June 2000.	
		HEINE et al., "Interprocedural Program Analyses," ACM SIGPLAN 2000 Conference on Programming Language Design and Implementation, Vancouver, B.C., 22 pages, http://suif.stanford.edu/suif/suif2/doc-2.2.0-4/tutorial/analysis.ppt , June 2000.	
		HEINE, "An Overview of the SUIF2 Base Infrastructure," ACM SIGPLAN 2000 Conference on Programming Language Design and Implementation, Vancouver, B.C., 30 pages, http://suif.stanford.edu/suif/suif2/doc-2.2.0-4/tutorial/basesuif.ppt , June 2000.	
		HOLZLE et al., "OSUIF: SUIF For Objects," ACM SIGPLAN 2000 Conference on Programming Language Design and Implementation, Vancouver, B.C., pages 1-17, http://suif.stanford.edu/suif/suif2/doc-2.2.0-4/tutorial/osuif-intro.ps , June 2000.	
		KESSLER et al., "EPIC - A Retargetable, Highly Optimizing Lisp Compiler," ACM SIGPLAN Notices, Proceedings of the 1986 SIGPLAN Symposium on Compiler Construction, Volume 21, Issue 7, pages 118-130, July 1986.	
		KHEDKER et al., "Bidirectional Data Flow Analysis: Myths and Reality," ACM SIGPLAN Notices, Volume 34, No. 6, pages 47-57, June 1999.	

EXAMINER SIGNATURE:	DATE CONSIDERED:
<p>* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Attorney Docket Number	3382-65679-01
		Application Number	10/625,892
		Filing Date	July 22, 2003
		First Named Inventor	Mitchell
		Art Unit	2122
		Examiner Name	To be assigned
		KIENLE, "OSUIF: A Closer Look," ACM SIGPLAN 2000 Conference on Programming Language Design and Implementation, Vancouver, B.C., pages 1-31, http://suif.stanford.edu/suif/suif2/doc-2.2.0-4/tutorial/osuif-details.ps , June 2000.	
		KNOOP et al., "Lazy Code Motion," In Proceedings of the ACM SIGPLAN '92 Conference on Programming Language Design and Implementation, San Francisco, CA, 11 pages, June 1992.	
		KNOOP et al., "Partial Dead Code Elimination," In Proceedings of the ACM SIGPLAN '94 Conference on Programming Language Design and Implementation, 12 pages, June 1994.	
		LAM, "An Overview of the SUIF2 System," ACM SIGPLAN '99 Conference on Programming Language Design and Implementation, Atlanta GA, 20 pages, http://suif.stanford.edu/suif/suif2/doc-2.2.0-4/tutorial/suif-intro.ppt , May 4, 1999.	
		LIM, "Affine Partitioning for Parallelism & Locality," ACM SIGPLAN 2000 Conference on Programming Language Design and Implementation, Vancouver, B.C., 16 pages, http://suif.stanford.edu/suif/suif2/doc-2.2.0-4/tutorial/affine.ppt , June 2000.	
		MOREL et al., "Global Optimization by Suppression of Partial Redundancies," Communications of the ACM, Volume 22, No. 2, pages 96-103, February 1979.	
		RAMSEY et al., "Machine Descriptions to Build Tools for Embedded Systems," Proceedings of the ACM SIGPLAN Workshop on Languages, Compilers, and Tools for Embedded Systems, 17 pages, 1998.	
		SMITH, "Machine SUIF," ACM SIGPLAN 2000 Conference on Programming Language Design and Implementation, Vancouver, B.C., 15 pages, June 2000.	
		STALLMAN, "Using and Porting the GNU Compiler Collection," 504 pages, http://www.skyfree.org/linux/references/gcc-v3.pdf , July 28, 1999.	
		WEGBREIT, "Property Extraction in Well-Founded Property Sets," IEEE Transactions on Software Engineering, Volume 1, No. 3, pages 270-285, September 1975.	
		"Attribute-Based Templates for Microsoft .NET", 2001, newtelligence AG, 7 pages.	
		HARPER et al., "Compiling Polymorphism Using Intensional Type Analysis", ACM Symposium on Principles of Programming Languages, pp. 130-141, January 1995.	
		TARDITI et al., "TIL: A Type-Directed Optimizing Compiler for ML", 1996 SIGPLAN Conference on Programming Language Design and Implementation, pp. 181-192, May 1996.	
		TARDITI, "Design and Implementation of Code Optimizations for a Type-Directed Compiler for Standard ML", PhD Thesis, Carnegie Mellon University, 6 pages of introduction and pp. i-266, December 1996 (Available as Technical Report CMU-CS-97-108)	
		MORRISETT et al., "Stack-Based Typed Assembly Language", Xavier Leroy and Atsushi Ohori, editors, Lecture Notes in Computer Science, Vol. 1473, pp. 28-52, March 1998.	
EXAMINER SIGNATURE:		DATE CONSIDERED:	
* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.			

INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Attorney Docket Number	3382-65679-01
		Application Number	10/625,892
		Filing Date	July 22, 2003
		First Named Inventor	Mitchell
		Art Unit	2122
		Examiner Name	To be assigned
		Colby et al., "A Certifying Compiler for Java", 2000 SIGPLAN Conference on Programming Language Design and Implementation, pp. 95-107, Vancouver, Canada, June 2000.	
		NECULA, "Compiling With Proofs", PhD thesis, Carnegie Mellon University, 27 pages, September 1998.	
		Alpern et al., "Detecting Equality of Variables in Programs" Proceedings of the 15 th ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages, pp. 1-11, 1988.	
		BACON, "Fast and Effective Optimization of Statically Typed, Object-Oriented Languages", PhD thesis, Computer Science Division, University of California, Berkeley, 3 pages of introduction and pp. i-141, 1997.	
		BODIK et al., "ABCD: Eliminating Array Bounds Checks on Demand", Proceedings of ACM SIGPLAN 2000 Conference on Programming Language Design and Implementation, pp. 321-333.	
		CYTRON, "Efficiently Computing Static Single Assignment Form and the Control Dependence Graph", ACM Transactions on Programming Languages and Systems, pp. 451-490, 1991.	
		DEAN et al., "Optimizations of Object-Oriented Programs Using Static Class Hierachy Analysis", European Conference on Object-Oriented Programming, pp. 77-101, 1995.	
		GAY et al., "Fast Escape Analysis and Stack Allocation for Object-Based Programs", Proceedings of the 2000 International Conference on Compiler Construction, 12 pages, 2000.	
		GUPTA, "Optimizing Array Bound Checks Using Flow Analysis", ACM Letters on Programming Languages and Systems", pp. 135-150, 1993.	
		LENGAUER et al, "A Fast Algorithm for Finding Dominators in a Flowgraph", ACM Transactions on Programming Languages and Systems, pp. 121-141, 1979.	
		MUELLER et al., "Avoiding Unconditional Jumps by Code Replications", Proceedings of the SIGPLAN '92 Conference on Programming Language Design and iMplementation, pp. 322-330, June 1992.	
		RUF, "Effective Synchronization Removal for Java", ACM SIGPLAN Conference on Programming Language Design and Implementation, pp.208-218, BC, Canada, 2000.	
		TARJAN, "Testing Flow Graph Reducibility", Proceedings of the Fifth Annual ACM Symposium on Theory of Computing, pp. 96-107, 1973.	
		VITEK et al., "Efficient Type Inclusion Tests", Proceedings of OOPSLA '97, pp. 142-157, Atlanta, Georgia, 1997.	
		Sun Microsystems, Inc., "The Java Language Environment: 6 - Security in Java, 6.3 The Byte Code Verification Process" http://web.archive.org/web/19990302092957/http://java.sun.com/docs/white/langenv/Security.doc3.html , 3 pages (March 2, 1999).	

EXAMINER SIGNATURE:	DATE CONSIDERED:
<p>* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Attorney Docket Number	3382-65679-01
		Application Number	10/625,892
		Filing Date	July 22, 2003
		First Named Inventor	Mitchell
		Art Unit	2122
		Examiner Name	To be assigned
		YELLIN, "Low Level Security in Java" http://web.archive.org/web/19990117003400/http://java.sun.com/sfaq/verifier.html 13 pages (Jan. 17, 1999).	
		ANDF Consortium, "ANDF Overview" http://web.archive.org/web/20021208181559/http://www.info.uni-karlsruhe.de/~andf/overview.htm , 2 pages (Dec. 8, 2002).	
		X/Open Company Ltd., "X/Open Preliminary Specification, Architecture Neutral Distribution Format (XANDF)" pages 1-10 (X/Open Company Ltd. 1996).	
		Cedilla Systems Inc., Products http://web.archive.org/web/20010728193511/www.cedillasystems.com/pages/about/products.html , 2 pages (July 28, 2001).	
		LEE, A Certifying Compiler for Java http://www-2.cs.cmu.edu/~petel/pcc/pcc-slides/SDIPOP.pdf , 10 pages (Sept. 2000).	
		AHO et al., "Compilers: Principles, Techniques and Tools", Copyright © 1986 by Bell Telephone Laboratories, Inc., cover and pp. ii, vii-x, 12-14, 463-512, and 585-722.	
		APPEL, "Modern Compiler Implementation in ML", Copyright © Andrew W. Appel, 1998, Cambridge University Press, cover and pp. iv-viii, 148-210, 344-376, and 427-467.	
		FRASER et al., "A Retargetable C Compiler: Design and Implementation", Copyright © 1995 by AT&T and David R. Hanson, cover and pp. iv, vii-xii, 311-372.	

EXAMINER SIGNATURE:	DATE CONSIDERED:
* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.	